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Caodeng rGyalrong phonology: a first look

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1. INTRODUCTION

The variety of rGyalrong reported here is spoken at the Gaqiuli (嘎秋里 Ka-khyo-ris /qʁ-tʃʰwe-ri?/) Village, Caodeng (草登 Tsho-bdun /tsʰo-bdən/) Township, Sidaba District (四大壩 sTod-pa /stot-pʁ/), Ma-erkang County, Aba Prefecture, Sichuan. Caodeng belongs with Ribu (日部 rDzong-nbur) and Dawei (達維 Ta-we) to the **Sidaba** or **Northwestern** dialect of rGyalrong. Data on Caodeng were gathered at Ma-erkang in August through September 1994, mainly from Mr. 石丹羅 (/rtɐn-lo/), aged 31 in 1994, currently an instructor of mathematics at the Ma-erkang Junior Normal College. Transcription of the data is phonemic.

The Sidaba dialect of rGyalrong includes, in addition to Caodeng, a significantly divergent Ribu-Dawei subdialect, which is said to be also spoken in Southwestern Aba and Central Rangtang. All in all, Northwestern rGyalrong is spoken in four counties: (1) Ma-erkang 馬爾康: the Sidaba District with three townships: Caodeng, Ribu, and Dawei (now renamed 康山 Kangshan); (2) Aba 阿壩: in certain villages of Kesha 柯沙 and Rongan 茸安 Townships at the southwestern corner of the county abutting the Sidaba District of Ma-erkang County; (3) Rangtang 壤塘: along middle Duke 杜柯 river in Wuyi 吾依 (formerly, and locally still, known as 耿達 Gengda) Township (south of Kalong 卡龍 Village, which is Amdo-speaking) and parts of Shili 石里 Township (north of Zhongdashigou 中大石溝, Xiongla 雄拉, and Shangdashigou 上大石溝); (4) Seda 色達: south of the Seda river near the confluence of the Seda and Duke Rivers.

There are ten villages in Caodeng Township. According to our consultants, the speech of Gaqiuli, Daiji (代基 /tɐj-tsi?/), Zhulin (珠林 /tʃu?/), Zhouche (周車 /χtsəɣ?-tsʰe?/), Ka-ergu (卡爾古 /mkʰér-gu/) are practically identical. Kelaji (科拉基 /qʰɔ-lɐ-kji?/) and Sini (斯尼 /sɲi?/) differ from the above only slightly (e.g. Gaqiuli **-e** <-> Kelaji **-ɐ**). The speech of Baoyan (寶岩 /pó-ᵑgʁ/) and Shazuo (沙左 /ʁla-ʁlo?/) shows marked influences from the Dawei subdialect, while the local dialect of Sila-erdi (斯拉爾底 /snɛ́-rᵑdi/) Village shares affinities with the **Northern** or **Chabao** dialect.

2. PHONOLOGY

2.1. Segmental phonology

The following system of initial consonantal contrasts can be established for the Gaqiuli variety of Caodeng rGyalrong (those in parentheses are marginal or occur only in Tibetan or Chinese loans):

p	t	ts	tʂ	tʃ	k	q	
pʰ	tʰ	tsʰ	tʂʰ	tʃʰ	kʰ	qʰ	
b	d		(dʐ)	dʒ	g		
ⁿb	ⁿd	ⁿdz	ⁿdʐ	ⁿdʒ	ⁿg	ⁿG	
m	n			ɲ	ŋ		
(f)	s		(ʂ)	ʃ	x	χ	(h)
v	z			ʒ	ɣ	ʁ	
	r						
	(ɬ)						
	l						
w				j			

/p/:

pa	'pig'
qɐ-**p**e?r	'wild dog'

/pʰ/:

pʰər-tʃu	'bowl'
pʰo-waŋ	'boulder'

/b/:

tə-**b**u?	'roasted bun with meat filling'
qa-jlo-**b**e?	'dough'

/ⁿb/:

kɐ-**ⁿb**i?	'give'
ké-**ⁿb**ət	'sand'

/m/:

me?	'no!'
ké-**m**ɔ	'swallow st. dry'

/t/:

kə-to?	'exist; have'
ké-ta	'weave'

/tʰ/:

tʰəl-pɐ	'cloak'
ké-**tʰ**i	'drink'

/d/:

du-**d**ut	'turtledove'
rə-**d**aʔ	'animal'

/ⁿd/:

kɐ-**ⁿd**əʔs	'gather vi'
kɛ́-**ⁿd**i	'carry; ride'

/n/:

kə-**n**ət	'burn vi'
nə-**n**əʔ	'that'

/ts/:

kɐ-**ts**omʔ	'take away'
kɛ́-**ts**ə	'say; speak'

/tsʰ/:

kə-**tsʰ**aŋ	'complete'
tsʰet	'goat'

/ⁿdz/:

ⁿdzem	'bridge'
kɛ́-**ⁿdz**or	'stand'

/tʂ/:

kə-**tʂ**a	'naughty'
kə-**tʂ**ot	'hot (of weather)'

/tʂʰ/:

kə-**tʂʰ**ət	'drop n'
tʂʰuʔ	'maybe'

/dʐ/:

χsol-**dʐ**ev kɐ-pe	'reward v'

/ⁿdʐ/:

tə-**ⁿdʐ**e	'photo'
ⁿdʐo-we	'guest'

/tʃ/:

tʃeʔ	'tea'
tʃo-ne	'dance'

/tʃʰ/:

kə-**tʃʰ**ət	'hold vi'
tʃʰɛ́-mɛ	'lass'

/dʒ/:

qɐ-**dʒ**iʔ	'sheep'
kɐ-nɛ́-**dʒ**ev	'fall asleep'

/ⁿdʒ/:

kɐ-**ⁿdʒ**a	'swim'
tɛ́-**ⁿdʒ**i	'skin'

/ɲ/:

ɲɐ-pu	'lamb; kid'

/k/:

kom?	'door'
kə-**k**o?	'this'

/kʰ/:

kʰo	'room'
tə-**kʰ**e	'mouth'

/g/:

tɐ-**g**o?	'fool'
pʰó-**g**ɛ	'quilt'

/ⁿg/:

kə-**ⁿg**e	'wear'
rə-**ⁿg**u	'boulder'

/ŋ/:

tɐ-**ŋ**e?	'drought'
slé-**ŋ**ɐ	'moon'

/q/:

kɐ-**q**é-se	'search'
ké-**q**a	'skin; shell vt'

/qʰ/:

qʰɐl-du	'ashes'
tə-**qʰ**u	'backside'

/ⁿG/:

tə-**ⁿG**ɐr	'sputum'
kə-**ⁿG**o?	'loose'

/s/:

sé-**s**u	'lunch'
ké-**s**is	'know'

/z/:

kʰaŋ-**z**ɐr	'spoon'
zɔ?	'bovine'

/ɬ/:

skɐm-**ɬ**a? kə-pe	'(lightning) flash'
ɬe	'god'

/ʂ/:

ʂɐp	'bridle'

/ʃ/:

ʃɔ	'buckwheat'
ʃe	'flesh; meat'

/ʒ/:

ʒɐ-le	'mud for smearing on wall'
tɐ-**ʒ**e	'chieftain's wife'

/x/:

kɐ-tʃə-**x**ó-**x**o	'neigh'
kɐ-sɐ-**x**ər-**x**ər	'throw on the ground'

/ɣ/:

ɣón-bo	'prince who becomes monk'
kɐ-nɛ́-**ɣ**ɐ	'play v'

/χ/:

kɛ́-**χ**əm	'snore'
kə-**χ**ɔ	'good'

/ʁ/:

tə-**ʁ**ɐ-jlo	'leftside'
tɐ-**ʁ**e?	'younger sibling'

/h/:

hɛ́-t^{h}jo kɐ-pe	'sneeze'
mɐ-**h**e	'buffalo'

/r/:

pó-**r**ot	'spider'
ʃkú-**r**u	'takin'

/l/:

lí-**l**i	'cat'
kɐ-**l**ɐt	'release'

/w/:

tɐ-**w**o?r	'hoarfrost'
ta-**w**a	'liquor'

/v/:

kɐ-**v**ɐ-vo	'whimper'
tə-vu?	'spindle'

/j/:

qɐ-**j**u	'insect'
tɔ́-**j**a	'hand/arm'

In addition, a full set of palatal affricates must be recognized, herein interpreted as palatalized velars; i.e. /kj/=[cç]; /k^{h}j/=[cç^{h}]; /gj/=[ɟʝ]; /^{n}gj/=[^{n}ɟʝ].

Only a small subset of the possible initial consonants can occur as syllable codas: /-p; -t; -m; -n; -ŋ; -r; -l; -s; -?/. The coda /-r/ is usually devoiced; conversely, /-s/ is usually voiced. /-p/ can be optionally realized as a partially devoiced labio-dental spirant [-v̊], causing the entire syllable to take a falling pitch. Thus, /ʂɐp/ 'bridle' is either [ʂɐp^{H}] or [ʂɐv̊^{HL}].

In contrast with its elaborate system of distinctive consonants, Caodeng rGyalrong has a well-balanced and relatively simple vocalic system:

i	**ə**	**u**
e	**ɐ**	**o**
ɛ	**a**	**ɔ**

If gliding vocoids are treated as combinations of main vowels plus the two consonantal glides, /j/ and /w/, then it is not necessary to posit underlying diphthongs for Caodeng rGyalrong.

2.2. Segmental phonological processes

2.2.1 Assimilation

Anticipatory assimilation is quite common in Caodeng. In the following example, the vowel **-ə** in the perfective negator morpheme **mə-** becomes **[e]** and **[o]** under complete assimilation to the subsequent syllables **te-** and **to-**.

mə-te-mərku	[me-te-mər̊ku]	'he did not steal'
mə-to-ʁⁿdoŋʔ	[mo-to-ʁⁿdoŋʔ]	'he did not beat me'
nə-to-ʁⁿduʔ	[no-to-ʁⁿduʔ]	'he beat you'

2.2.2 Syncope

Caodeng also employs rules that simplify medial consonant clusters, as shown in the following examples:

ká-tʃov	'six'	kə-tʃo-sqe	'sixty'
ká-rkjet	'eight'	kə-rkje-sqeʔ	'eighty'
ká-ⁿgət	'nine'	kə-ⁿgə-sqe	'ninety'
kɐ-pʰət	'to demolish'	pʰə́-tsə-kə	'Let's (us two) demolish!'

2.2.3 Epenthesis

kɐ-n-re-we	[kɐ-n-dzɻe-we]	'to hope'

2.3. Ablaut

Vocalic alternation, or **ablaut**, is one of the most salient phonological characteristics of Gaqiuli Caodeng. Although this phenomenon is seen to some extent also in other parts of speech (e.g. ʃkótse 'stone' vs. ʃkotsɐpu 'pebble'; mŋo-sqeʔ 'fifty' vs. sqɐ́-mŋo 'fifteen'), it is with verbs that ablaut is most noteworthy. In brief, some forms in the verbal paradigm contain vowels that

are systematically different from those in the citation-forms (i.e. infinitives). The most commonly attested phonological alternation is lowering (e.g. -**e** > -**ɐ**; -**i** > -**e**), although other alternations also exist (e.g. -**ɐ** > -**e**; -**e** > -**ɔ**). Comparative evidence shows that it is often the (synchronically) ablauted values that are historically prior (e.g. 'to eat' ^{n}dz**e** {root} vs. ^{n}dz**ɐ** {ablauted form}; cf. lCog-rtse z**a**; PTB ***dza**). Two ablaut patterns have been noted so far. The first pattern (hereafter **ABLAUT A**), exemplified by such verbs as kɐ-wi 'to come' and kɐ-r^{n}bɐ 'to press' exhibits ablaut only in the non-first-person perfective forms, whereas the other more common and more complicated pattern (hereafter **ABLAUT B**), exemplified by such verbs as kɐ-^{n}bi? 'to give' and ké-t^{h}i 'to drink' has ablauting in the first person singular (all tenses), non-first-person singular (future only), as well as singular imperative/prohibitive forms in the paradigm. Some common verbs representing each pattern are listed below:

Gloss	**Verb**	**Alternation**	**Pattern**
to buy	kɐ-χtu	**u** → **ɐ**	B
to come	kɐ-wi	**i** → **e**	A
to drink	ké-t^{h}i	**i** → **e**	B
to eat	kɐ-^{n}dze	**e** → **ɐ**	B
to give	kɐ-^{n}bi?	**i** → **e**	B
to press	kɐ-r^{n}bɐ	**ɐ** → **e**	A

Another type of morphologically conditioned ablaut has been noted in the limited database between the infinitive and the perfective. This area is in need of further investigation. For example:

'full:INF'	ká-mts^{h}ot
'full:PF'	tə-mts^{h}ɔt

2.4. Suprasegmental Phonology

2.4.1 Pitch-accent

The single most important suprasegmental property in Caodeng is pitch. Unlike such Eastern dialects as Zhuokeji, Benzhen, or Suomo, Caodeng appears to have developed a **pitch-accent system** reminiscent of, but much simpler than, Standard Tokyo Japanese. Phonological words in Caodeng rGyalrong differ as to whether (and where) there is a pitch-drop in the middle of the word, as evidenced in the minimal pairs bellow (syllable-sequences manifesting the pitch-drop are boldfaced):

'tax'	**tɐ^{H}-ri^{L}**
'rope'	tɐ^{L}-ri?^{H}
'sow'	**pa^{H}-mo^{L}**
'boar; male pig'	pa^{L}-p^{h}o^{H}; **pa^{H}-gjo^{L}**
'Dangba (pn)'	**tɐ^{H}-ŋbɐ^{L}**
'Aba (pn)'	rŋɐ^{L}-pe^{H}
'Pontso (pn)'	**p^{h}ən^{H}-ts^{h}ɔ^{L}**
'Dawa (pn)'	zlɐ^{L}-wɐ^{H}
'my age'	**ɐ^{H}-ʃwe^{L}**
'my tooth'	ɐ^{L}-ʃwe^{H}
'a bottle of'	kə^{L}-**tɐ^{H}-ŋbi^{L}**
'bottle'	tɐ^{L}-ŋbi?^{H}

smi? kə^{L}-**mev^{H}-kjə^{L}**
fire PF:OR-be extinguished-EVID
'The fire has gone out.'

smi? **kə^{H}-mev^{L}**-kjə^{L}
fire PF:OR:Q-be extinguished-EVID
'Has the fire gone out?'

nɐgji-kə tawa jə^{L}-**tə^{H}-t^{h}e^{L}**
2nd-AGT liquor FUT-2:-drink
'You are going to drink the liquor.'

nɐgji-kə tawa **jə^{H}-tə^{L}**-t^{h}e^{L}
2nd-AGT liquor FUT:Q-2-drink
'Are you going to drink the liquor?'

The pitch-drop (**H-L**) will henceforth be represented by an **acute accent** on the high-pitched syllable before the pitch-drop, for instance:

'tax'	**tɐ́**-ri
'rope'	tɐ-ri?

smi? kə-**mév**-kjə
fire PF:OR-be extinguished-EVID

'The fire has gone out.'

smi? **kɔ́**-mev-kjə
fire PF:OR:Q-be extinguished-EVID
'Has the fire gone out?'

Accent placement in Caodeng is usually on the last two syllables of a word. Antepenultimate and pre-antepenultimate accents, which occur mainly in conjugated verbal forms, are infrequent. Unlike Japanese, there does not appear to be any phonological distinction between ultimately-accented and unaccented syllables. Ultimate accent can thus be considered the default accent position and left unmarked. Although the accent system in Caodeng seems relatively limited in scope, accent must be lexically specified as its occurrence is unpredictable from the rest of the phonological structure. As in Tokyo Japanese, unaccented word-initial syllables as well as post-accent syllables are low-pitched, whereas medial syllables before the accented syllable normally take the high pitch. Syllable-final vowels tend to devoice in unaccented open syllables (e.g. /kɤ́-tʰi/ → [kɐ^{55}tʰi̥^{11}] 'to drink'), apparently as a corollary of reduced syllabic prominence. Furthermore, when a penultimately-accented word becomes the first element of a compound in word-formation, its accent is suppressed:

'foot'	**tɔ́**-me
'back side'	tə-**qʰú**(?)
'heel'	tə-me-**qʰú**(?)
'rain'	**tɔ́**-mu
'water'	tə-**tʃí**?
'rain-water'	tə-mu-**tʃí**?
'sand'	**qɤ́**-ᵑbət
'salt'	tsʰe
'sand-salt'	qɐ-ᵑbət-**tsʰe**
'fox'	**qɤ́**-tʃʰwet
'rope'	tɐ-**ri**?
'Gaqiuri (pn)'	qɐ-tʃʰwe-**ri**?
'stone'	**ʃkó**-tse
'diminutive sf'	pu
'pebble'	ʃko-tsɐ-**pu**

'Phentso (pn)'	**pʰə́n**-tsʰɔ
'Trashi (pn)'	tʂɐ-ʃi?
'Phentso Trashi'	pʰən-tsʰɔ? tʂɐ-**ʃi?**

However, penultimate accent is retained if it is the second element in a compound that carries an accent. Interestingly, since word-formation rules in rGyalrong require the deletion of the prefix of the second compound element on which the original accent is usually placed, the inherited 'floating' penultimate accent is realized on the root of the preceding compound-element:

'foot'	**tə́**-me
'eye'	**tə́**-mɲa
'ankle'	tə-**mé**-mɲa

Similar effects recur when verb roots are partially reduplicated to derive the corresponding **reciprocal** forms:

'like'	kɐ-rge
'like each other'	kɐ-rgə-rge
'pull'	kɐ-rɐ-ⁿtʰen
'pull each other'	kɐ-rɐ-ⁿtʰə-ⁿtʰen

but:

'hit'	**kɐ́**-xsəw
'hit each other'	kɐ-**xsə́**-xsəw
'look for'	kɐ-**qɐ́**-se
'look for each other'	kɐ-qɐ-**sə́**-se

As well as in the derivation of causative verb forms:

'die'	**kɐ́**-set
'cause to die'	kɐ-**sə́**-set
'full'	**kə́**-mtsʰot
'fill'	kɐ-**sə́**-mtsʰot

Thus, accent in Caodeng exhibits the property of **stability** commonly attested in African tone systems.

In sum, all of the foregoing data can be most straightforwardly accounted for in terms of accent or syllabic prominence, with the most noticeable phonetic

manifestation being modulations in pitch-register, much as in Tokyo Japanese. The phonological function of pitch in Caodeng, therefore, involves **accentual** rather than purely **tonal** phenomena. Moreover, accent in this language should be represented on a separate tier independent of the segmental structure.

2.4.2 The glottal stop

The glottal-stop coda, which normally (but not always) conditions a high-level pitch, is also contrastive in Caodeng. For example:

'sweet'	kə-kʰji
'candy; sugar'	kə-kʰji?
'narrow'	kə-tʃor
'sour'	kə-tʃor?
'heavy'	kə-rgji
'light adj'	kə-gji?

Reversal of syllable-final glottality is one of the markings of perfectivity in Caodeng:

'to buy'	kɐ-χtu
'he will buy'	jə-χtɐj
'he bought'	te-χtu?
'to wear'	kɐ-ⁿge
'he will wear'	jə-ⁿgɐ
'he wore'	te-ⁿge?
'to fetch'	kɐ-ro?
'he will fetch'	jə-roj?
'he fetched'	te-ro
'to smoke'	kɐ-ski?
'he will smoke'	jə-ske?
'he smoked'	te-ski

Word-finally in unaccented syllables, the glottal coda does not appear at all.

2.4.3 Functional forms

Certain grammatical prefixes are **accent-retaining**. The futurity markers **ʃə-** and **jə-** are cases in point: if the verb root has penultimate accent, so will the future forms. Contrast the following forms of the two verb roots **kɐ-ni** 'to drive (livestock) to pasture' and **ké-ko** 'to drive (livestock) back to fold':

ɐgji-kə zɔ ɐki **ʃə́**-ko-ŋ
'I will drive the bovines to pasture.'

ɐgji-kə zɔ ɐki ʃi-ni-aŋ
'I will drive the bovines back to fold.'

With other tenses no difference in accent exists between the two verbs:

ɐgji-kə zɔ ɐki ɐsɐ-ko-ŋ
'I am driving the bovines to pasture.'

ɐgji-kə zɔ ɐki ɐsɐ-ni-aŋ
'I will drive the bovines back to fold.'

ɐgji-kə zɔ ɐki nɐ-ko-ŋ
'I drove the bovines to pasture.'

ɐgji-kə zɔ ɐki nɐ-ni-aŋ
'I drove the bovines back to fold.'

Another such prefix is the second person index **tə-** in future verb forms:

nɐgji zɔ ʃə-**tə́**-ko ə́-ŋo
2sg bovine FUT**1-2**-drive to pasture Q-be
'Are you going to drive the bovines to pasture?'

nɐgji zɔ ʃə-tə-ne ə́-ŋo
2sg bovine FUT**1-2**-drive back to fold Q-be
'Are you going to drive the bovines back to fold?'

Contrast the above with the absence of penultimate accent in the other tenses:

nɐgji zɔ t-ɐsɐ-ko ə́-ŋo
2sg bovine 2sg-IMPF-drive to pasture Q-be
'Are you driving the bovines to pasture?'

nɐgji zɔ t-ɐsɐ-ni ə́-ŋo
2sg bovine 2sg-IMPF-drive back to fold Q-be
'Are you going to drive the bovines back to fold?'

nɐgji zɔ jɐ-tɐ-ko ə́-ŋo
2sg bovine PF-2-drive to pasture Q-be
'Did you drive the bovines to pasture?'

nɐgji zɔ jɐ-tɐ-ni ə́-ŋo
2sg bovine PF-2-drive back to fold Q-be
'Did you drive the bovines back to fold?'

The SAP-affecting imperative marker **Co-** is another accent-retaining prefix. For instance:

kətʃi? kə́tʂʰət **nó**-ʃtʰe-aŋ!
water some IMP:RV-give to drink-1sg
'Give me some water to drink (< **ké**-ʃtʰe 'to give to drink')!'

2.4.4 Compounds vs. Phrases

As shown above, when a penultimately-accented word becomes the first element of a compound in word-formation, its accent is suppressed. However, the penultimate accent is retained if it is the second element in a compound that carries an accent. In other words, only one accented syllable is allowed per phonological word in Caodeng. True phrases in Caodeng do not involve accent-reduction, but compounds do. Therefore, compounds form unitary phonological words while phrases do not, as seen in the examples below:

'foot' **tə́**-me
'eye' **tə́**-mɲa
'ankle' tə-**mé**-mɲa

'eye' **tə́**-mɲa
'skin' **tə́**-ⁿdʒi
'eyelid' tə-**mɲá**-ⁿdʒi

'foot' **tə́**-me
'back side' tə-**qʰú?**
'heel' tə-me-**qʰú?**

'foot'	**tə́**-me
'tip'	tə-**kó?**
'tip of foot'	tə-me-**kó?**
'foot'	**tə́**-me
'back'	tə-**zgé?**
'back of foot'	tə-me-**zgé?**
'foot'	**tə́**-me
'side'	tə-**ʒⁿbé?**
'side of foot'	tə-me-**ʒⁿbé?**
'foot'	**tə́**-me
'heart'	tə-**sní**
'center of sole'	tə-me-**sní**
'foot'	**tə́**-me
'finger/toe'	tə-**ⁿdzrú?**
'toe'	tə-me-**ⁿdzrú?**
'rain'	**tə́**-mu
'water'	tə-**kjí?**
'rain-water'	tə-mu-**kjí?**
'head'	tə-**kó?**
'hair'	tə-**rmɛ́**
'hair of head'	tə-ko-**rmɛ́**
'head'	tə-**kó?**
'skin'	**tə́**-ⁿdʒi
'scalp'	tə-**kó**-ⁿdʒi
'head'	tə-**kó?**
'brains'	**tə́**-rnɔ
'brains'	tə-**kó**-rnɔ
'head'	tə-**kó?**
'nit'	ⁿdzru?
'nit in hair'	tə-ko-**ⁿdzrú?**
'head'	tə-**kó?**
'louse'	ʃer
'head-louse'	tə-ko-**ʃer**

'head'	tə-**kó?**
'bone'	**ʃɛ́**-ru
'skull'	tə-ko-**ʃɛ́**-ru

'fox'	**qɛ́**-tʃʰwet
'rope'	tə-**rí?**
'fox-rope (pn)'	qɐ-tʃʰwe-**rí?**

Consider the accent patterns of the N-V and N-ADV phrases below, each of which constitutes two phonological words, each with its own accent:

'order (n)'	**tɔ́**-ⁿdzu
'to do/make'	kɐ-**pé**
'to order'	**tɔ́**-ⁿdzu kɐ-**pé**

'dance (n)'	tʃo-**né**
'to do/make'	kɐ-**pé**
'to dance'	tʃo-**né** kɐ-**pé**

'dog'	kʰɛ-**zé?**
'big'	kə-**xté**
'big dog'	kʰɛ-**zé?** kə-**xté**

'person'	kə-**rⁿbjó?**
'bad'	kə-sa-**qʰɛ́**
'bad person'	kə-**rⁿbjó?** kə-sa-**qʰɛ́**

'my spouse'	**ɛ́**-rgje
'good'	kə-**vdé**
'kind'	kə-**ŋɔ́**-lɐ
'my good wife'	**ɛ́**-rgje kə-**vdé**
'my kind wife'	**ɛ́**-rgje kə-**ŋɔ́**-lɐ

2.4.5 Accent Shift

Three cases have been noted so far where accent shift has syntactic import. First, yes-no questions are formed out of statements by shifting the original accent of the verb phrase to the penultimate syllable, and, if the penultimate syllable already bears the accent, to the **antepenultimate** syllable.

ʃó?r	sonɐm	tawa	ne-**tʰí**
yesterday	pn	liquor	PF:OR-drink

'Sonam drank liquor yesterday.'

ʃó?r sonɐm tawa **né**-tʰi
yesterday pn liquor PF:OR:Ø-drink
'Did Sonam drink liquor yesterday?'

smi? kə-**mév**-kjə
fire PF:OR-be extinguished-EVID
'The fire has gone out.'

smi? **kə́**-mev-kjə
fire PF:OR:Ø-be extinguished-EVID
'Has the fire gone out?'

koko-kə ɐgji? jo-**nə́**vlo-aŋ
3sg-AGT 1sg fut-cheat-1sg
'Maybe he will cheat me.'

koko-kə ɐgji? jó-nəvlo-aŋ
3sg-AGT 1sg fut:Ø-cheat-1sg
'Will he cheat me?'

nɐgji-kə zɔ? ʃə-**tə́**-ko
2nd-AGT bovine FUT-2:Ø-drive to pasture
'You will drive the bovines to pasture.'

nɐgji-kə zɔ? **ʃə́**-tə-ko
2nd-AGT bovine FUT:Ø-2-drive to pasture
'Will you drive the bovines to pasture?'

nɐgji-kə tawa jə-**tə́**-tʰe
2nd-AGT liquor FUT-2:-drink
'You are going to drink the liquor.'

nɐgji-kə tawa **jə́**-tə-tʰe
2nd-AGT liquor FUT:Ø-2-drink
'Are you going to drink the liquor?'

Another function of (leftward) accent shifting derives vocative forms of personal names, thus:

PN	Vocative Form
rtɐn-**ló**	**rtén**-lo
skɐ-lə-**vzáŋ**	skɐ-**lə́**-vzaŋ
so-**ném**	**só**-nɐm
ptʂɐ-**ʃí**	**ptʂé**-ʃi
ʁge-^{n}**dón**	**ʁgé**-^{n}dən
zlɐ-**wɔ́**	**rtén**-lo
to-^{n}**dzʐə́v**	**tó**-^{n}dzʐəv
dzʐo-**mɛ́**	**dzʐó**-mɐ
lhɐ-**mu**	**lhé**-mu
rgjɐ-**mtsʰó**	**rgjé**-mtsʰo
stɐ-^{n}**dzɔ́n**	**sté**-^{n}dzən
ɲə-**mɛ́**	**ɲɔ́**-mɐ

If, however, the original name already carries penultimate accent, the vocative form remains unchanged (barring heightened intonational effects):

pʰɔ́n-tsʰɔ	**pʰɔ́n**-tsʰɔ

Third, when names of utensils are used as units of measurement, accent is shifted to the penultimate syllable, for example:

zro-**lá?**	'copper bucket'
kə-**zró**-la	'a bucket of'
tʰɐ-**vá?**	'plate'
kə-**tʰé**-va	'a plate of'
pʰər-**tʃú**	'bowl'
kə-**pʰór**-tʃu	'a bowl of'

This phonological process is freely applicable to either Tibetan or Chinese loanwords:

tɐ-^{n}**bí?**	'bottle' (< Tibetan)
kə-**té**-^{n}bi	'a bottle of'
rdzɐ-**ʁó?**	'cup' (< Tibetan)
kə-**rdzé**-ʁo	'a cup of'
tʂoŋ-**tʂóŋ**	'cup' (< Chinese)
kə-**tʂóŋ**-tʂoŋ	'a cup of'

pʰən-**tsə́**	'basin' (< Chinese)
kə-**pʰə́n**-tsə	'a basin of'

2.4.6 Construction-Specific Accent Patterns

Some morphosyntactic processes impose their own accent on the constituent morphemes. Thus, intensive forms of stative-verbs obligatorily receive penultimate accent, regardless of the accent positions of the original verbs.

3. Minimal and Near-Minimal Sets

3.1 Onsets:

k <-> q:

kaj?	'Walk!'
qaj	'wheat'

tʃ <-> kj:

tɐ-**tʃ**e	'throw st down'
tɐ-**kj**e	'pour you out of (bag)'

ɲ <-> ɲ:

kɐ-r**ɲ**i	'to taste'
kɐ-**ɲ**i	'to drive back to fold'

x <-> χ:

tə-**x**tse	'shoes'
kə-**χ**tse	'clean adj'

ɣ <-> ʁ:

kɐ-**ɣ**ⁿdu	'throw st down'
ka-**ʁ**ⁿdu	'beat'

v <-> w:

tə-**v**ot	'sleeves'
mt^{h}ɐ-**w**ot	'skirt'

3.2 Rhymes:

ɐ <-> a:

t**á**-ri	'body filth'
t**ɐ́**-ri	'tax'

o <-> ɔ:

ʃ**o**	'who'
ʃ**ɔ**	'buckwheat'

e <-> ɛ:

tə́-m**e**	'foot'
tə́-m**ɛ**	'woman'
m**e**?	'No!'
m**ɛ**?	'poplar'

3.3 Accent-Pitch:

t**ɐ́**-ri	'tax'
tɐ-**rí**?	'rope'; 'shelves for storing grain'
kə́-tʃor	'pickled radish leaves'
kə-**tʃór**?	'sour'